CATS NEWSLETTER

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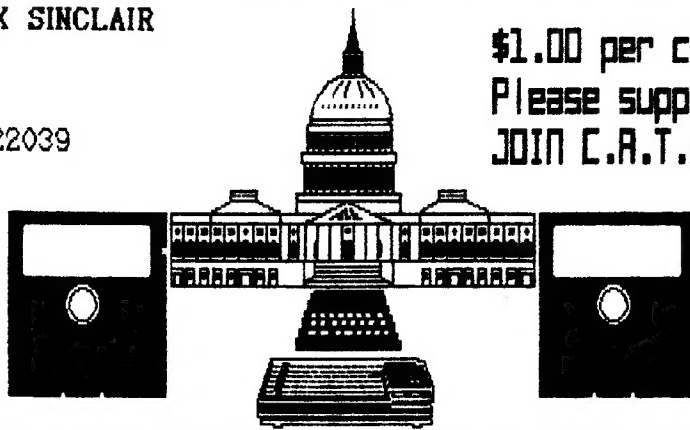
JANUARY, 1989

IN THIS ISSUE

CONTRIBUTORS

Vernon Smith	George Rey
Duane Parker	John Riley
Barry Washington	Herb Schaaf
Charles Reise	Bob Diggs
Pieter van Dijk	Cliff Watson

PRESIDENTIAL RAMBLINGS

Happy New Year

- Happy New Year!

I hope that you've recovered from the holiday festivities and are ready to tackle the many tasks that face us in 1989. First and foremost is the Capitolfest. This will require the efforts of all the members to make it a success. Elsewhere in this issue is an ad for the fest and, for the discerning reader, it contains the CATS BBS number. Formal announcement will be next month. Last but not least, let your fingers do the talking. I need articles. I don't mind reprinting from other N/Ls. On the contrary. When there is a good article, I always try to get it in, but I hate filling up an issue with "filler" material. If we can't support our own newsletter, perhaps we shouldn't have one. I'm still searching for someone to write a monthly column on the 1000 (Ted?) and the 2068.

- The news

What's new out in Sinclairland? Some old faces are departing the scene. Currry Computer has gone MS-DOS and also ceased publication of the QL Report. EZ Key, an old name from TS1000 days, and Foote Software have sold out to RMG in Oregon. Knighted Computer, which had previously dropped the QL from their line, decided to go all the way and sold the rest to WMJ Data Systems. After a long absence, Quantum Computing and Frank Tomei have surfaced, in Bankruptcy Court! Assets of $0.01 and liabilities of $61,933.05. Frank ripped quite a few people off and I know how it feels. Several years ago, Ramex/Foundation Systems stole $300 from me when they went out of business. If you have a claim against Quantum Computing that has not been submitted, you should contact: Jonathan Kohn, 1180 Raymond Blvd., Newark, NJ 07102-4107. The Plotter indicates that the long awaited Sept/Oct issue of Time Designs is now out. Harvey Taylor's excellent telecomm program, Q Link, is now being distributed as shareware. I wish Harvey a great deal of success and I hope those users who have "copies" of the program will send their registration fees in. Harvey is one of the true gurus in the Sinclair World and it would be a pity to lose someone as talented as he. Finally, Sharp's has some offerings that I'm sure will get your attention. Several years ago, IBM bundled our Psion programs into a smart little package for their MS-DOS machines in England. Thus EXchange was born. Though they couldn't multi-task, they fixed it so you could quickly switch between programs. Price around $500. XChange is a shell with four programs, while PC Four, for around $100, was just the four Psion programs bundled together. Well, XChange is now available for the QL. This is the software that originally was for the Thor. Sharp's has it for $60. I've seen it running and it is a beaut. While it is designed to stand alone, combining it with Taskmaster's excellent file handling capability would yield a real monster front-end program. DP's MS-DOS emulator will be arriving in the next few weeks and it appears to have everything that you could wish for, including the ability to run the latest version of DOS, 4.0. Finally, Digital Precision's Professional Publisher has arrived. My first impressions are that it's really a quantum leap ahead of DTP Special Edition. I'll be getting into it in greater depth in the next few month and I'll keep you posted.

- In this issue

Look at the Classifieds. Paid ads! Bob Diggs, vacationing in sunny Florida, gives us some help in using the CATS BBS. Cliff Watson has a neat 2068 utility, PRLIN, for screen printing. Charles Reise has sent in the setup instructions for his checkbook program from the November issue. Pieter van Dijk has another one of his little drawing jewels. Barry Washington has a word search puzzle. We also have an article by John Riley on the Larken autosave circuit and the conclusion of his December submission. Herb Schaaf solves the monitor retrace problem. Finally, Duane Parker gives us the low down on Importing.

- February submissions

I will not be at the January meeting so please send material for the February newsletter to the CATS mail

KEY DATES

January
14 General Meeting
24 Executive Board meeting
27 February Newsletter DEADLINE

February
11 General Meeting
21 Executive Board meeting
24 March Newsletter DEADLINE

JANUARY AGENDA

11:00 Hardware Workshop

12:00 CYA Workshop

2:00 General Meeting

2:45 Programming with Pascal

by Duane Parker

4:30 Adjourn

NOTE: At this meeting we will ONLY have the LARGE MEETING ROOM

NEWSLETTER SUBMISSIONS

Submissions for the newsletter can be in hard copy, with *columns 2 3/8 inches wide* or, PREFERABLY, magnetic media. For the QL, microdrive cartridge, 5 1/4" DS/DD or Quad density disks, or 3 1/2" disks. For the ZX81, TS1000, or 2068, cassettes only, with titles on the box.

Send material to:

Editor, CATS Newsletter

Box 467

Fairfax Station, VA 22039

POTPOURRI
News Around the Beltway

CATS MEETING PROGRAM SCHEDULE
by George Rey

Month	MEETING/TOPIC	Speaker/Chair
Jan	Programming with Pascal	Parker,D. (Olowofoyek)
Feb	Intercomputer Transfers	Quintero
Mar	Software — Games Review	Curnutt
Apr	Telecomputer-communications	
	by Radio	Diggs (Russo)
May	CATS COMPUTER FEAST	All Us CATS (And Mouses)
Jun	Disc and other Drives	Bent
Jul	Computer Uses	Schaaf
Aug	Memory Expansions/Requirements	Jordan
Sep	Complete TS 2068 Systems	Miller
Oct	Sinclair Computer Libraries	Barnhart

Sinclair Hardware Workshop		Bent Inc.
All CYA QL Hands-on Abacus/Easel Workshop		Rey Inc.
All HELP! (Attendees S/H'ware ?'s — 10 minutes	Russo Inc.—	

THE BULLPEN (Reserve of topics and speakers)

Spreadsheets — Experiences/	
Programming	Rey
Inter-club Exchanges	Warmick
The TS (CLASSIC) 1000	Osheroff
What's Next ? Jamboree	Russo
Whats New ?	Guest Speaker—Vendors
Bookeeping/Budgets & Things	Fegley

The above is the tentative meeting topic schedule of programs for the coming year as approved by the Executive Board. It is based on the June "Soul" interest survey, is flexible and subject to change as conditions warrant. If you have been "chosen" to speak, chair, or to set up, conduct, or help set the programs, be grateful. If you are not, contact me at (301) 262-2968 or at meetings to discuss what is involved to get a "4 F" classification or National Guard duty. Or, press ESCape. In any event contact me for suggestions or suggest topics or speakers for scheduling or of interest to you and CATS.

A PROBLEM

Over the last several months, my housekeeping has really gone to the dogs. If you've ever seen my basement, you'll understand. Several people have indicated that they've submitted newsletter articles and they haven't seen them published. I've looked high and low and I still can't seem to find them.

- The solution & a plea

So I'm asking for your help. If you've submitted something that hasn't run, would you please send it in again. TIM SWENSON, I HAVE YOURS.

- PLEASE

QL submissions: **ON MICRODRIVE OR DISK ONLY.** 2068: If possible, port it over to the QL. Use Mark Fisher's December article as a guide. 1000: Hard copy is fine. I need all the 1000 material I can get. Thanks.

LET'S IMPORT
by Duane Parker

Here I had 132 files on a disk, where is the one I want? If they were only in alphabetical order! The computer should be able to do that, but how? There is probably a utility in Super-Media Manager, or some- place, but what can we do with only the QL's software? Put the directory into a file, order the lines, and print it. I don't have a "sort" procedure in S-BASIC – what to do? ARCHIVE will order lists! First I need to import, and the QL User's Guide (information section, pp. 1&2), tells me how. Several lines of code did it. (Flp_ or ram_ can be used to replace mdv_, if these devices are available.)

```
10 OPEN_NEW #6, mdv1_dir

20 DIR #6, mdv1_ :CLOSE #6

30 OPEN #6, mdv1_dir:REMark
Makes dir list, opens it, & resets to
beginning of the file

40 OPEN_NEW #7,mdv1_dir_exp

50 FOR i=1 TO 2:INPUT #6,x$:PRINT
x$:REMark Removes the DIR title
lines & shows them

60 PRINT #7,'"file$"'

70 FOR i=1 TO 200

80 IF EOF(#6) THEN EXIT i

90 INPUT #6,x$:PRINT #7,"";x$;""

100 END FOR i

110 CLOSE #6:CLOSE #7:STOP
```

Now my "dir_exp" file is in the proper format and can be imported into ARCHIVE. The fields (only one in this case, "file$") must be on the first line & enclosed in quotes. The rest of the lines must have all the fields in each line, with the character fields in quotes and the fields separated by commas. The lines are terminated with line feeds (<LF>, ASCII code 10, as S-BASIC does with "PRINT"). I then booted up ARCHIVE and typed: IMPORT "mdv1_dir_exp" AS "mdv1_dir". Once the drive stopped,

a DISPLAY command showed that the database was there and already OPENed. With an "ORDER file$;A" and then "DUMP", I had my printed, alphabetized directory.

So importing can work. With a bit different program that uses the INPUT #i,x$:PRINT #j,x$ idea I copied COMPUSERVE's "GO" index into a file, and them imported it into an ARCHIVE database. Information that comes from on-line sources is nicely terminated with a carriage return (<CR>, ASCII code 13) and a <LF> so the INPUT,PRINT idea serves as a simple method to generate files for IMPORTing.

We can even get DBASE databases into ARCHIVE, now that there are good program to transfer files from MS-DOS formats to the QDOS format. These utilities are IBMCOPY or DISCOVER and are available from dealers. DBASE III+ has the "COPY TO" command that will generate almost what is needed by ARCHIVE if the "DELIMITED") qualifier is used. The format of this command is:

COPY TO <filename>[fieldnames] DELIMITED.

The command, that is used with an open database, will generate a file with the contents of the designated fields (or all fields, if none are listed) with each data item separated by commas, and char- acter fields in quotes, almost as ARCHIVE requires. Please note that the < > and [ ] designate, respectively, re- quired and optional user imput, for this command and the <, >, [, and] are not entered as part of the command. For example, if the DBASE database contained two character fields and one numerical field (item, brand, on_hand; for example) the DELIMited file lines might be:

"Disks, flpy","3-M",500 "Rib-bons","Epson, FX80",20 etc.

Of course, the missing line for ARCHIVE is the field definition, "item$","brand$","on_hand"

We can put this into the export file by making a separate file with this line in it and joining it with the DELIMITED file. On a PC, we can use a simple editing program (EDLIN, SIDEKICK, etc.), MS-DOS (the procedure is: "COPY CON A:\fields.txt", then type on screen: "items$","brand$","on_hand", and then press F6), or a word- processing program (save the line as an ASCII text file) to generate this one-line file. The MS-DOS command: "COPY fields.txt + ourdb.txt archive.exp" serves to combine the two needed files into the one "exp" file that we need, with the field definitions in the first line, followed by the data in the required format. Then IBMCOPY is used to convert archive.exp to QDOS's format and copy it on a QL disk or mdv.

The fields line can also be added to the "ourdb_txt" file with the use of the QL if we have already transferred it to the QDOS media (mdv's, flp's, or ram_disk's). The QDOS COPY com- mand does not chain files together, as MS-DOS does with the use of "+", but we can OPEN_NEW #j,archive_exp file, PRINT the needed line to it, and then from the OPENed #i, ourdb_txt file repeatedly INPUT #i,x$: PRINT #j,x$ until all lines are printed. Of course, the files must then be CLOSEd. Easier and quicker is the SPL command from TOOL_KIT2, it will chain OPENed files together: SPL #i TO #j:SPL #k to #j, etc., does the job. Therefore, the following lines will make the proper file for import:

```
10 OPEN_NEW #5, mdv1_fields_txt

20          PRINT
#5,"item$","brand$","on_hand"

30 OPEN #6, mdv1_ourdb_txt

40          OPEN_NEW#7,
mdv1_archive_exp

50 SPL #5 to #7
```

Let's Import-Continued

```
60 SPL #6 TO #7

70 CLOSE #5,#6,#7:STOP
```

Thus, such files can be imported into an ARCHIVE dbf-file. Since DBASE's field format is different than ARCHIVE's, some changes must be made. DBASE field names may be only 10 characters long, so they will all be within the 13 character limit that ARCHIVE allows.

DBASE has five types of fields,

1) character (length up to 254),

2) numeric (decimal or integer, 3) logical (true, false),

4) date, and

5) memo (for blocks of text).

ARCHIVE has just the character (up to 255 charcters long) and numeric field types. DBASE requires that the length of character fields be designated when the database is created, and as records are added it fills out each field with spaces. In contrast, ARCHIVE stores the fields only to their actual length (the length of the character field is held in the first byte of the field, while numeric fields are a standard length). Thus, a DBASE db will usually occupy more file space than its equivalent ARCHIVE dbf. Memo fields are handled differently than the rest and probably can not be exported. Logical fields can not be directly exported, since they get printed as T and F, without quotes, in the DELIMITED file. The DBASE logical field names can be edited and changed to character fields, then "COPY TO, DELIMITED" command adds the quotes. Thus "T" and "F" can be imported into an ARCHIVE db fields. I have not done anything with "date" fields, but I assume that if they are converted into a standardized fromat by DBASE in the DELIMITED file they will also be enclosed in quotes.

I have thrashed around and around with these IMPORT files, many times getting error messages from ARCHIVE when the import files contained errors. From the results I have been able to develop the following requirements. So, if your "IMPORT" fails check this list.

Items required in the file:

1) The filename must have an extension, any extension (_exp, _a, etc.).

2) The 1st line must be the fields & fields must have $ for string fields & no designation for numerical fields.

3) All field-names must be delimited by " ", and separated by commas.

4) All the data must be in the proper order in each line. Strings must be enclosed in quotes, " ", while numeric data must be without quotes. Items must be separated by commas.

5) Data items may not have a " sign in them; ARCHIVE becomes confused with this situation and will put the wrong data per field.

6) Fields may not have control charcters in them (ASCII: #0–27, ARCHIVE takes them to be <LF>'s).

7) Fields may not be > 255 characters including the "". Thus, only 253 characters can be IMPORTED, even though two more characters may be added later with ARCHIVE's ALTER command. (Long DBASE fields can cause trouble here, they may be one character too long for ARCHIVE.)

8) The lines may be terminated by line feeds (ASCII #10), alone or carriage returns (ASCII #13) and line feeds, together, in any combination. QL S-BASIC, adds only the <LF>, while the export features of all of the PSION applications programs, except QUILL, put a <CR> and a <LF> at the end of each data set.

9) The PSION programs also add a CTRL Z character (#26) to the end of the file, but this apparently is not necessary for an ARCHIVE IMPORT procedure.

It should also be possible to export from ARCHIVE to DBASE db's, since ARCHIVE will generate a DELIMITED file that may be imported into DBASE (by use of "APPEND FROM <filename> DELIMITED"). The DBASE db must be first created and opened with the "USE <db-name>" command. The created database must contain the proper number and types of fields in agreement with the "exp" file. DBASE does not use the first line to define its fields. The first line of the ARCHIVE export file may cause a problem, since it may have text (numeric field names) in items in which numbers are expected. The DBASE software may allow one to continue APPENDing after such an error has occurred. Otherwise the first line will have to be edited out of the export file.

I have limited this importing of db's to DBASE since this is what I have available to me. Similar principles

PRLIN

By Cliff Watson

Have you T/S 1000 or Sinclair ZX81 owners ever wished that you could use the "COPY" command to copy less than the whole screen without having to "BREAK" when the desired number of lines has been printed? If so, read on.

Type in the following program. You can edit line 9989 to make lines 9996 and 9997. Change the –6 in line 9989 to –5 in line 9996. "RUN" the program. Enter "STOP" when the cursor appears. Note that line 9999 has changed from "12345" to "–>??#". Delete lines 9989 through 9994.

To use this program, you can:

A) Use two lines in the program where you want to "COPY" less than the whole screen. The lines are: "LET PRLIN=XX" and "GOSUB 9996". Where "XX" is the number of lines you want to copy. This number can be different in each location. Lines 9996–9999 are needed for this option.

B) Use "GOSUB 9995" and enter the number of lines to be copied when the cursor appears.

C) Change "18" in line 9991 to the

MATH AND GRAPHICS ON THE QL

by Pieter van Dijk

Mathematical equations can become interesting when the results are plotted on the screen. A different way of showing results is demonstrated in the following program. Nice "pictures" can be made in a simple way after a suitable equation is found and proper loop limits are used. This example fills one sheet of printer paper with 80 characters wide output. By the way, I found this equation in a book on Fortran programming.

```
100 OPEN#3,SER
110 A$='OI#|*=+:%-X'
120 FOR X=0 TO 5 STEP 8E-2
130 B$="":FOR Y=-40 TO 40
140 Z=INT(X+SIN(PI*X)+Y^2/400+1)
150 B$=B$&A$(Z)
160 NEXT Y
170 PRINT#3,B$
180 NEXT X
190 CLOSE#3
```

PRLIN-Continued from page 5

number of lines to be copied and use "GOSUB 9997". This is suitable for use when the number of lines is the same throughout a program but is not the "22" used by "COPY". The only lines you need to keep for this option are lines 9997-9999.

```
9989 LET A=(PEEK 16396+256*PEEK 16397-6)
9990 POKE A,22
9991 POKE (A+1),18
9992 POKE (A+2),195
9993 POKE (A+3),107
9994 POKE (A+4),8
9995 INPUT PRLIN
9996 POKE (PEEK 16396+256*PEEK 16397-5),PRLIN
```

General Instructions for Using the Abacus Spreadsheet Checking Program Published in the November Issue

by Charles E. Reise

After setup **(SEE PAGE 7 FOR COMPLETE SETUP INSTRUC- TIONS)** is completed and saved, you are ready to enter your checks for whichever month you wish, push F3 "L" "JAN". Begin by entering DATE: Shift, ", 1/1/89. Move cursor to Cell C1: Right arrow twice. Enter check number. Move to E1, do the Shift, ", again and enter to whom check was

written. Go to H1. Enter Beginning Balance. If you made no deposits or received no interest on this date, or if no debits, such as charges for checks or service, which may be entered as minus deposits, then go to E3. Enter check amount. Continue to next check, A6.

If there are checks not received in time for this statement, it would be best to skip that check number and

just enter it when it is received the following month in the correct number. Any voided checks should be entered with its correct number and just written to "VOID".

Receipts from bank or any automatic teller should be attached to a blank check, entered at that check number, and written to "AUTO".

EDITORS NOTE: Charles Reise writes that his original checkbook article in our November issue omitted the formulas for the following cells, B4: B2+D2+F2+H2 and C6: C1+1.

SPREADSHEET??

by Charles E. Reise

No! It's a word processor. Using QL-SS (Abacus). It's fun and kind of simple. Start by loading same. Press F3, "G" (for Grid), "W" (for Width), 36 (for 36 characters or an approximate 3 1/2 inch column. Type enter to expand column A. Press Shift , " (for text). Note control area at the top. Type a line at a time but do not go over 36 characters, as anything over will not print. If you wish to expand column A to up to 66 characters, repeat the Grid Width sequence. Follow all prompts in control area. Experiment with all commands. You will be surprised how versitile this approach can be.

EDITORS NOTE: Using the spreadsheet as a word processor can familiarize you with the Abacus program; however, the lack of word wrap and other features of Quill may be large drawbacks to using it. One possible use for it, though, might be the preparation of tables which require a great deal of tabular data.

WORD SEARCH

by Barry Washington

Can you find 16 related computer words?

```
W K R N O A O Q W E R T Y R K
H C L O B P U M Y O Y N I L E
M A M J S V I P S R E S H B T
D T R L K S A C E E C P E R Y
L S W D S P E T R O Z P B R B
O M M V D P S C D N A N U A H
F M E T W I S B O T Q F F M Q
N J M V G H S S Q R W C F D L
A O O E N C A K Z P P Y E I T
F D R A O B Y E K Y O O R S L
X J Y Q Q Y G Y K K Q D C K F
```

For solution see page 9

INSERT SS IN MDV1. PRESS F1 TO LOAD. THIS IS, IF YOU ARE USING A MONITOR. THE LARGE AREA IN THE CENTER IS THE GRID. COLUMNS ARE LETTERED. ROWS ARE NUMBERED. THE CURSOR IS IN CELL A1. CLOUMNS ARE 10 CHARACTERS WIDE. ONE CHARACTER SPACE BETWEEN EACH COLUMN. ONLY SEVEN ARE SHOWING (THERE ARE 64) AND THEY MAY BE VARIED IN WIDTH, FROM 1 TO 66 CHARACTERS. THERE ARE 255 ROWS. DIRECTIONS FOR SETTING UP FOLLOW.

PRESS F3 G W 8 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 9 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 6 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 8 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 9 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 9 ENTER ENTER ENTER RIGHT ARROW

PRESS F3 G W 9 ENTER ENTER ENTER RIGHT ARROW

LEAVE CELL H1 AS IS. YOU NOW HAVE EIGHT COLUMNS. PRESS F5 B1 ENTER. CURSOR IS NOW IN CELL B1. CELL A1 WILL BE FOR DATE, WHICH MUST BE ENTERED AS TEXT (SHIFT QUOTATION) LATER. "12/25/88. ALL TEXT ENT–RIES MUST BE ENTERED IN THIS MANNER. YOU ARE IN B1. TYPE IN AS TEXT"CK_NUM ENTER GO TO D1(RIGHT ARROW) TWICE. ENTER IN D1- TO___ –WHICH MEANS TO WHOM CHECK IS WRITTEN THIS IS JUST A LABEL FOR E1 WHERE THE NAME WILL BE ENTERED. F1 WILL BE BLANK. TYPE IN BAL_FORW IN G1. PUT A ZERO (0) IN H1. NUM–BERS AND FORMULAE ENTERED IN A CELL SHOULD NOT BE PRECEEDED BY SHIFT QUOTATION. JUST ENTER THEM AND PRESS ENTER. NOW TO ROW 2. PRESS F5 A 2 ENTER. ARE YOU THERE? CELL A2, C2, E2, ARE LABELS FOR B2, D2, AND F2. THEY ARE CALLED DEP_1, DEP_2, AND DEP_3 RESPECTIVELY. THE ACTUAL FIGURES WILL BE ENTERED IN B2, D2, AND F2. G2 WILL BE LABELED INT AND WILL BE ENTERED IN H2. FOR NOW, ENTER LABELS IN THEIR RESPECTIVE CELLS, AND 0 IN B2, D2, F2, AND H2. CELL A3, (F5 A 3) REMEMBER!! TEXT, TOT_BAL, RIGHT ARROW, 0, RIGHT ARROW, RIGHT ARROW. WHERE ARE YOU? D3. TYPE CK_AMT, GO TO E3, TYPE 0. SKIP F3. IN G3 TYPE FORW_BAL, THEN IN H3, 0. PRESS F5 A 4. TOT_DEPS. B4 0, C4 BLANK, D4 TOT_CKS, E4 0, F4 # OF CKS, G4 1, H4 ***********.

GO TO (F5) A 5. TYPE ROW=REPT("-",WIDTH()+1) ENTER.

GO TO A6, PRESS F3 C ENTER ENTER.

GO TO A1, PRESS F3 J ENTER R ENTER ENTER.

PRESS F3 U ENTER ENTER. CHANGE RANGE TO B1:B9 ENTER. GO TO D1.

PRESS F3 U ENTER ENTER. CHANGE RANGE TO D1:F9 ENTER. GO TO H1.

PRESS F3 U ENTER ENTER. CHANGE RANGE TO H1:H9 ENTER

——CELL FORMULAE——

ENTER THESE FORMULAE IN CORRESPONDING CELLS.

B3——H1+B2+D2+F2+H2	H3——B3-E3
B4——B2+D2+F2+H2	E4——E3+0
C6——C1+1	H6——H3+0
B8——H6+B7+D7+F7+H7	H8——B8-E8
B9——B4+B7+D7+F7+H7	E9——E8+E4
G9——G4+1	

GO TO A11. PRESS F3 C. CHANGE RANGE TO A6:A10. ENTER ENTER. THIS WILL COPY CHECK # 2 TO CHECK # 3. MOVE TO A16. COPY CHECK # 3 TO # 4. CONTINUE THIS PROCEDURE UNTIL CHECK # 19 HAS BEEN COPIED. YOU NOW HAVE 20 CHECKS FOR THE MONTH.

PLACE FORMATTED MDV IN MDV2. PRESS F3 S TYPE JAN ENTER THEN SAVE

FEB, F3 S FEB ENTER–F3 S MAR ENTER–F3 S APR ENTER–F3 S ENTER MAY–F3 S JUNE ENTER WILL FILL ONE CARTRIDGE. JUST REMOVE AND INSERT ANOTHER TO CONTINUE THROUGH THE REST OF THE YEAR.

MORE ADVENTURES WITH THE LARKEN DISK SYSTEM by John Riley

PART III — THE BUILDING OF THE AUTOSAVE CIRCUIT

Having shared with you recently about the virtues of the Larken disk system, I want to continue the narrative with the construction of the NMI Autosave Circuit. I have been for several years involved in learning and teaching others how to go about the sometimes arcane business of transferring programs from cassette to disk. Imagine how attractive would be the prospect of doing this at the mere push of a button! In the full Larken system, this button is built into the disk controller board (along with a Kempston joystick port). I, however, have an AERCO controller adapted for use with the ingenious Larken cartridge by disabling the NMI (Non-Maskable Interrupt) line. Instead of simply cutting the wire, I spliced in a toggle switch, and thus retain the

capability of running under AERCO DOS with the flick of a switch and the removal of the Larken Cartridge.

The capability to run the disk drive in Spectrum mode was what attracted me to the Larken system, but there was a major fly in the ointment — most Spectrum programs are heavily copy-protected, and thus inaccessible to transference by the usual means. A hardware solution was in order, and Larken thoughtfully provided one with the documentation on the Larken/AERCO cartridge. This is what the cicuit looks like:

CIRCUIT DIAGRAM NEXT MONTH

Now, those of you who remember me will know that I needed help with this one. "Electronically retarded" was one of the nicer things that the hardware wizards of CATS used to call me. But that's what friends are for! To help you build circuits, that is, not to call you names. So I shopped around, bought the components, and went to the house of a friend, a math professor who dabbles in electronics. The parts totalled about $10, by the way. In a couple of hours he bread

To be concluded next month

Retrace Lines: 2068 and RGB Monitor

by Herb Schaaf

Like several others, I wanted to use the nifty thrifty Skip Fisher RGB monitor with both my fascinating and formidable QL and also with my trusty old friendly TS-2068. The hookup to the QL or the 2068 both gave the crisp colors known to most, but the 2068 made retrace lines across the top half of the screen, unless I used BORDER 0 (black). Since others had learned to live with the same problem I begrudgingly took it as "that's life".

Well, lo and behold ! It can be cured ! At the October CATS meeting George Rey, Duane Parker, Jonathan Vanderwall, myself, and several others brought their skills and resources to bear upon the problem; of course it had to yield once confronted with all that talent.

The circuit takes 3 IC chips, a couple of resistors, a variable resistor, 4 or 5 bypass capacitors, and the usual amount of bits of wire, solder, luck, sweat, and swears or tears, depending on your nature. The chips are: 74HC00 (as used on the Oliger board), 555 timer, and 7408 Quad 2-input AND gate. I tried a 74LS08 at first but it didn't do. The resistors are 47K, 1K, and a 10K pot that could be replaced with a fixed value (unless you enjoy tweaking things as much as I do) The capacitors I used were .1 uf bypasses that seem to be abundant on most of the surplus IC circuit boards found at hamfests and computerfests.

The idea is to use the 74HC00 as Oliger did to get nice horizontal and vertical sync pulses off the base of Q5 (via the 47K resistor), integrate (with the 1K resistor and a cap.) a little of the vertical sync and invert that with a gate of the 74HC00 and then use that inverted pulse to trigger the 555 monostable. The output of the 555 (duration controlled by adjusting the variable resistor) is sent to the 7408 AND gates thus cutting off the RGB signals during retrace.

Works like a charm ! There is an extra AND gate leftover.

First thing we CATS all do is get inside the case and look for a place to jam another "modification and/or improvement". I found some vacant real estate between the Z80 and the monitor jack, and also between the Z80 chip and the SCLD chip. See sketch #1 . I put the chips in "upside-down" flat on their back with the legs sticking up into a bit of perfboard wedged into that angle-iron sort of brace. Nearby this brace were also found some handy spots for picking up the RGB signals. I mounted a 8-pin DIN socket nearby on the back of the 2068 just behind the post hole in line with the "9" key. I set the variable resistor so I could tweak it with a small screwdriver throough the monitor jack opening.

Sketch #2 gives a general idea of how components were connected. Bypass caps from +5 to ground were used on each chip, but are not shown. Keep in mind that these are upside-down views !

Sketch #3 shows the connections to the lugs of the 8-pin DIN socket as viewed from the inside of the 2068.

After you get it all together adjust the variable resistor and blank out as much of the retrace lines (and screen) as you like. I also adjusted the sync and white level control VR1 (one of the three little variable resistors that came with the 2068, not the closest to the on-off switch, but the one above and to the left of the built-in speaker) for the best picture.

Hope you enjoy wiping out those retrace lines as much as I did !

More Fun with the Larken Disk Drive System by John Riley—Continued from the December issue.

You will notice that the syntax allows for six letters in the program name, then a two-symbol extension. The second character of the extension can be a number or a letter. Those of you who remember my tutorials in Aerco in-program file-handling syntax (about as easy as tying your shoes with your teeth) will like the simplicity of LKDOS, e.g.:

100 INPUT "Which file to load?";z$
110 PRINT #4: LOAD z$ CODE

To sum up, I've made a little progress in learning LKDOS, but there is still plenty to find out about. Future goals include (in order of priority) converting Jack Dohaney's MSCRIPT over to LKDOS so I can do wordprocessing in either system, installing a "snapshot save" button, building a Kempston-compatible joystick port, and hacking the machine code of the "protected" Spectrum programs to make them amenable to LKDOS file-handling. Last but not least, check out my comparison chart of the Aerco-Dos and LKDOS systems, which represents one man's views (mine!) of the strengths and weaknesses of each.

WORD SEARCH SOLUTION														
*	K	R	*	*	*	*	Q	W	E	R	T	Y	*	*
H	C	*	O	*	*	*	*	*	*	*	N	I	*	E
*	A	*	*	S	*	*	*	R	E	*	*	B	T	
D	T	R	*	*	S	*	*	E	E	C	*	E	*	Y
L	S	*	D	*	*	E	T	R	*	*	P	B	R	B
O	*	M	*	D	P	S	C	D	N	A	N	U	A	*
F	*	E	*	*	I	S	*	O	T	*	*	F	M	*
N	*	M	*	G	H	S	*	*	R	*	*	F	D	*
A	O	O	E	*	C	*	K	*	*	P	*	E	I	*
F	D	R	A	O	B	Y	E	K	*	*	O	R	S	*
*	*	Y	*	*	*	*	*	*	*	*	*	C	K	*

QL 'n PACKET UPDATE + TERMINAL PROGRAM FOR CATS' NEW BBS by Bob Diggs

Here I am again reporting on my Packet experience, but this time it's from our Sailboat in sunny Florida where us old codgers go to escape the winter chills. I changed my mind at the last minute and installed the QL instead of the T/S 1000 as planned. I might have been able to bring the monitor, but we were running short of time and I didn't get a chance to check if there was room for it. I did find a place to store the printer while we were underway. Incidently, we were 35 days, traveled 1466 miles, mostly under power, stopped to visit friends along the way, and had a wonderful trip.

My packet set up now is the QL, CITIZEN 120D printer, MFJ-1270B TNC, Icom 2AT, and the marine VHF antenna at the top of the mast (about 48 feet). It is a gain antenna and seems to do OK. I did not bring my amplifier for the HT, however, so it is barefoot. And, I have better results with my packet if I send <enter> one line at a time.

The first time few times on the air, I used a black and white TV which was not very satisfactory. It wwas OK for packet but lousy for the QL programs. So, I swapped the B&W for the ship's color tv. I soon discovered mode 8 was better than 4. The result was a new program which I call "mtvterm" because it can be used on either a monitor or a tv in either mode 4 or 8.

When I read about the CATS BBS, I remembered that oonly a few members got the MIKE_TERM program when I was showing my terminal programs. So, I revised it for either monitor or tv in either 4 or 8 mode.

Maybe some of the members are using or have some occasion to use TV, so I thought I would send it in. Same problems as reported before, but MIKE_TERM is still my favorite packet program for the QL.

```
1 REMark 300/1200 baud terminal
2 REMark From MIKE_TERM, printed in
            April issue of QZX
3 REMark According to Peter Hale,
            Boston Computer Society
4 REMark Mike Mitchell adapted it
5 REMark from QUANTA software library
            called terminal_bas.
6 REMark The minimal bell(beep) is to
            avoid
7 REMark having to type "over to you."
8 REMark Adapted for tv in mode 4 or
            8 by
9 REMark KV3Q, Bob Diggs
10 REMark 89 Riverside Drive
11 REMark North East, MD 21901
50 PRINT#0,"Choose screen: Monitor=m,
TV=t"
60 IF INKEY$(-1)=="m"THEN GO TO 100:EL
SE GO TO 70
70 WINDOW 425,160,45,0
75 BORDER 1,0,7: lb=127
80 PRINT#0,"Choose mode, enter 4 or 8"
85 CLS:INPUT a
90 MODE a:GO TO 110
100 WINDOW 465,204,6,0
105 BORDER 1,0,7: lb=127
110 CLS: POKE 163976,255: CLS#0
120  PRINT#0,"Choose Baud:   H=1200, L
=300"
130 IF INKEY$(-1)=="h"THEN BAUD  1200:
ELSE BAUD 300
140 CLS#0: OPEN#5,ser2i
150     PRINT#0,"    F5=Quit"!!!"ALT^C=
^C","^G=BEL"
160 REPeat term
170 terminal: PRINT#0,,"Exit?(y/n)"
180  IF INKEY$(-1)=="Y" THEN EXIT term
190 END REPeat term
200 CLOSE#5
205 PRINT#0,,'Re-run/Quit? (r/q)'
210  IF INKEY$(-1)=="R" THEN RUN: ELSE
 STOP
220 DEFine PROCedure terminal
230 REPeat key_loop
240    a=CODE(INKEY$(#5,0))&&lb
250     IF a=13 THEN PRINT
260     IF a=7 THEN BEEP 2000,15
270     IF a>31 THEN PRINT CHR$(a);
280    b=CODE(INKEY$)
290     IF b=248 THEN EXIT key_loop
300     IF b=255 THEN b=0
310     IF b=0 THEN NEXT key_loop
320     IF b=10 THEN b=13
```

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```
330      IF b=208 THEN b=7
340      PRINT#5, CHR$(b);
350      END REPeat key_loop
360 RETurn
370 END DEFine terminal
```

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Monthly meetings are held from 11 AM to 4:30 PM, on the second Saturday of each month, at the New Carrolton Public Library.

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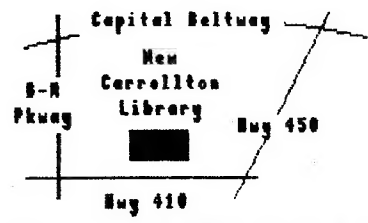
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The next meeting of CATS will be held on:

Saturday, January 14, 1989   11:00 AM Hardware Workshop

12:00 CYR Workshop   2:00 PM General Meeting

At: New Carrollton Public Library

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